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CAN ELECTRONIC COMMERCE BE AN ENGINE FOR GLOBAL GROWTH? ELECTRONIC COMMERCE AND THE INTEGRATION OF DEVELOPING COUNTRIES AND COUNTRIES WITH ECONOMIES IN TRANSITION IN INTERNATIONAL TRADE

Note by the UNCTAD secretariat

Executive summary

This paper, based on many of the analytical elements which will be developed in the background documentation for UNCTAD's regional workshops on electronic commerce to be held between July and October 1999, and in the context of the substantive preparations for UNCTAD X, stresses that access to electronic commerce remains uneven. This situation is all the more regrettable since electronic commerce has the potential to be a major engine for trade and development on a global scale in the next few years. On the basis of the work carried out so far under the auspices of the Commission on Enterprise, Business Facilitation and Development, two main areas of priority are proposed for future work: (1) the production of data, analyses and scenarios relevant to electronic commerce and development, and (2) the examination of ongoing and emerging trends in the global information economy and their possible impact on developing countries' participation in electronic commerce.

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Introduction

1. Further to the agreed conclusions of the Commission on Enterprise, Business Facilitation and Development at its third session, held from 23 to 27 November and on 14 December 1998 (see TD/B/COM.3/20), the secretariat has given priority to the following activities in its work on electronic commerce:

(a) In cooperation with other international and regional organizations working in the field of electronic commerce, the secretariat is gathering information on the development-related dimensions of electronic commerce, in order to make such information available through the worldwide web. Such efforts are being pursued in particular in the context of an informal group of Geneva-based institutions involved in electronic commerce, for which a common website is currently under construction. It is expected that, as a result of this joint effort, UNCTAD's own website will also be enriched regarding electronic commerce.

(b) UNCTAD has pursued its analytical and research work on the links between electronic commerce and development, with special focus on measures and policies likely to enhance the ability of these countries to participate more fully in global electronic commerce. A significant part of this work is being developed in the context of the preparation of regional workshops on electronic commerce, which the Commission also requested the UNCTAD secretariat to organize.[1] Other relevant organizations[2] have been approached in order to produce joint studies in areas of particular interest to developing countries and economies in transition, with particular importance being attached to the links between electronic commerce and trade facilitation. As they become available, such studies will be fed into the process of substantive preparations for UNCTAD X.

2. In addition to the series of background papers produced by the UNCTAD secretariat for the various sessions of the Commission, as well as for the expert meetings convened by the Commission since 1996,[3] a number of studies and contributions are currently being produced either as part of the work requested by the Commission (e.g. regional workshops) or as part of

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[1] This series of workshops and round tables will begin with a pre-UNCTAD X workshop on the exchange of experiences among enterprises involved in electronic commerce, to be held in Geneva from 17 to 18 June 1999, and should be followed by three regional meetings in Latin America in July 1999, Africa in September 1999 and Asia in October 1999. A background paper on electronic commerce and development will be produced by the UNCTAD secretariat as a basis for discussions in these regional meetings.

[2] Including the World Bank, the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD) and the International Telecommunication Union (ITU).

[3] See, in particular, the following documents related to electronic commerce: "Telecommunications, business facilitation and trade efficiency: some major implications of the global information infrastructure (GII) for trade and development" (TD/B/COM.3/EM.3/2), "Policy issues relating to access to participation in electronic commerce" (TD/B/COM.3/16), "Implications for trade and development of recent proposals to set up a global framework for electronic commerce" (TD/B/COM.3/17), "Training in the area of electronic commerce: needs and possibilities" (TD/B/COM.3/EM.6/2) and "Electronic commerce: legal considerations" (UNCTAD/SDTE/BFB/1). UNCTAD documentation can be found at our website: http://www.unctad.org

the various preparatory processes leading to UNCTAD X. It is expected that such work will progressively converge towards a set of policy proposals and recommendations designed to enhance the participation of developing countries and economies in transition in global electronic commerce.[4]

3. It is too early to predict how the expansion and growth of electronic commerce could affect the integration of developing countries and economies in transition on the global economy. However, it is possible to (i) take stock of recent trends relevant to this issue, (ii) identify some key issues requiring immediate international attention, and (iii) outline possible priority areas for future work on the relationship between electronic commerce, globalization and development.

I. THE MAIN TRENDS AFFECTING ELECTRONIC COMMERCE AND THE DEBATE ON ELECTRONIC COMMERCE AND DEVELOPMENT

A. Uneven access

4. The basic data provided in the report "Policy issues relating to access to participation in electronic commerce" (TD/B/COM.3/16) about disparities in access to basic telecommunications infrastructure and Internet hosts remain valid. On one hand, it is true that over the last five years the Internet has evolved from a network of some three million (predominantly United States-based) users into a commercial mass medium of over 100 million users worldwide, and that data traffic over the Internet is estimated to double every 100 days. On the other hand, it remains worth stressing that most rural areas in developing countries are still largely unconnected, and that even in countries listed as "electronic-commerce enabled", the cost of access to the Internet remains far beyond the means of most small and medium-sized enterprises.[5]

B. The accelerating and pervasive growth of electronic commerce

5. It is well known that estimates of electronic commerce, and associated projections of its growth, are subject to wide differences depending on the source and methodology employed. The statistical situation is improving, however, and it is at least possible to give a credible range within

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[4] Because such a set of proposals and recommendations would be the development counterpart to the four initial proposals made by developed countries on a global framework for electronic commerce (made, respectively, by the European Union, Japan, the United States and the OECD), it has often been described as the "fifth element" of proposals on global electronic commerce. Given the possibility that electronic commerce issues could be addressed at the Third Ministerial Meeting of the World Trade Organization (WTO) in Seattle in November–December 1999, it is to be expected that the work of relevant institutions (including UNCTAD) on these issues will intensify in the coming months.

[5] For example, in 1998, the average annual cost of a 20h/month Internet connection (off-peak use, excluding line rental charges) varied from US$ 9 in Malaysia to US$ 79 in Luxembourg. However, if the costs are viewed in relation to national income per capita, one obtains a more striking figure: in countries like France or Germany, the price of such a connection was roughly the equivalent of one week's income, whereas it was close to 12 weeks' income in Venezuela, and 16 weeks' in the Philippines.

which the value and geographical distribution of business is likely to fall. Most sources begin with numbers for electronic commerce dating from around 1995.

6. To fix a base, the OECD, in its preparatory work for the October 1998 Ottawa conference on electronic commerce, examined a dozen different sources and worked out the median of those estimates for the period 1995–1997. The figures suggested that the global value of all electronic commerce (national and international) was around US$ 725 million. In the same exercise, the OECD scrutinized the projections which these forecasting groups had made for the period 2000–2002. The median estimate was in excess of US$ 154 billion. In other words, the expected expansion using the median estimates was about 250-fold.

7. In March 1999, ITU reviewed the estimates of electronic commerce revenues. The figures reveal projections for business-to-business transactions in the period 2001/2002 ranging between US$ 100 billion and US$ 400 billion. Corresponding revenues from business-to-consumer transactions are much smaller, with again a large spread of projections from US$ 25 billion to US$ 90 billion in 2001/2002. These figures relate to the expected values of actual transactions, that is, Internet-based sales, and produce a low-end projection of some US$ 125 billion in the next two years and a high-end projection of about US$ 500 billion. Since at present a major function of electronic commerce as actually used by many economic agents is to facilitate the search for information, a broader estimate of the impact of electronic commerce would include the estimated value of transactions which are initiated online, though concluded in more traditional ways. Here the high-end projections for 2001/2002 suggest that the figure might be of the order of US$ 1.23 trillion, meaning that roughly 40 per cent would be transactions fully completed online, and about 60 per cent would correspond to deals facilitated by the Internet but not concluded on it.

8. Data on website revenues in 1998 show the massive dominance of the United States market: 93 per cent of all business related to websites based there, while roughly 62 per cent of websites were located in the United States.[6] Revenue per website in the United States is currently about 50 per cent higher than the global average. Other regions of the world thus have only a minimal participation in revenues from electronic commerce. In fact, according to 1998 estimates, non-OECD countries accounted for scarcely more than 2 per cent of global revenues from electronic commerce.

C. The potential of electronic commerce as a major engine for international growth and trade

9. The sectoral focus of electronic commerce, or rather the focus of its activities, is fast becoming broader, but some strong patterns remain apparent:

(a) ***Finance*** has long been a major user of electronic data interchange (EDI), with intranets and extranets ensuring electronic communications among dealers. The advent of

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[6] This phenomenon is being accentuated by the fact that top-level domain names (including .com addresses) are considered as "United States names" even when they belong to companies or individuals in other countries.

electronic commerce, however, has also spurred households to make use of electronic banking and online trading of financial securities.

(b) ***Travel and tourism*** is an area where online business is rapidly replacing face-to-face dealings. Two main factors seem to account for this. Information searches are a major part of the "consumption effort" in these fields, and Internet availability greatly cuts the time and costs of a search. The pricing of travel, in particular, also lends itself to online auctions which promise buyers substantial savings compared with the single dealing which has traditionally held sway. In the United States the Internet approach has already dramatically altered the composition of the market in this field.

(c) Virtually all facets of the ***marketing of entertainment*** are being transformed by the Internet. Indeed, this is one branch where the actual digitization of products is making them available, in hitherto unexplored combinations, direct to the consumer. These changes usually involve a sharp reduction in cost, but they have also led to serious disputes regarding piracy of intellectual property.[7]

(d) ***Other service sectors*** being dramatically affected by the expansion of Internet-based electronic commerce include insurance, brokerage and advertising. Moreover, the distribution of an increasing number of manufactured goods (such as books, computers or cars) is being radically transformed by electronic commerce.

10. In all these sectors, it is important to note that part of the expansion of electronic commerce comes from its takeover of activities which previously were accomplished through extranets. This applies particularly to business-to-business relations between major firms and their suppliers. Now, as part of the drive to cut costs in large industries and ensure that input and service suppliers are the best available, an Internet approach is being employed to link all partners. Standards are set by the purchasers, and suppliers must meet them. The automotive business is a leader in this field, though textiles and clothing, retail operations and other activities where subcontracting forms a critical part of operations are also targets. All these transformations are likely to translate into massive shifts in international comparative advantages, as specific products (particularly services) are increasingly traded by means of new "modes of delivery", to use WTO terminology.

11. However, much more important than the visible and foreseeable impact of electronic commerce on trade in specific services will be the transformations that electronic commerce will generate by promoting new industrial organization models (corporate structures) and business models (mechanisms to generate profit and competitiveness). Indirectly, such transformations will also underpin significant changes in the legal and regulatory environments required by global electronic commerce, and they will eventually affect jobs, qualifications and employment in general, as well as the power relations between producers, consumers and business partners. As the resulting "new deal" will put more emphasis on comparative advantages built on information, knowledge, education and culture, it may help developing countries and economies in transition to become better integrated in the emerging global economy. To do this, however, action would be required in a number of strategic areas.

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[7] See for instance, the current debate on the "MP3-based" transport of musical products.

II. ELECTRONIC COMMERCE AND DEVELOPMENT: WORK ACCOMPLISHED BY THE COMMISSION AND POSSIBLE AREAS FOR FUTURE WORK

12. So far, the work of the Commission in addressing electronic commerce issues has focused on three major areas, namely: (i) capacity-building (especially through the work of its expert meetings, which have dealt with access to telecommunications, human resources development and the legal aspects of electronic commerce); (ii) the identification of obstacles to developing countries' participation in electronic commerce; and (iii) the exchange of information and experiences in the area of electronic commerce.

13. While such work certainly needs to be pursued and stepped up,[8] a greater participation in electronic commerce by developing countries and economies in transition will require additional work in a number of areas, including the following:

(a) ***Scenarios and statistical underpinning:*** developing countries and economies in transition need to assess the potential impact of electronic commerce on their current and future trade structure. How will their present comparative advantages (e.g. in service sectors such as tourism or transport) be eroded or strengthened? In which activities could they contemplate building new strategic advantages? To what extent would factors such as international trade negotiations, the domestic regulatory environment and global corporate strategies affect such scenarios? Fiscal scenarios will be of particular importance in this context: for instance, what would be the impact on these countries of a "duty-free" Internet-based trading environment? Would the effects of trade creation and trade substitution offset losses of government revenues, and, if so, at what pace and with what kind of domestic effects? Could statistical knowledge about the actual use and accessibility of information technologies be enhanced in order to better describe the specificities of less developed economies? How do the various components of civil society in these countries perceive and value electronic commerce-related technologies and know-how?

(b) ***Structural changes in the world economy and their impact on electronic commerce:*** the emergence of information as a central factor of production and competitiveness has triggered a number of significant changes in the ways value is created and distributed. At the same time, global strategies have been designed and developed around information-intensive activities, and new power relations have emerged in the process. For example, it would be important to assess how the recent wave of mergers and acquisitions (and possible dominant positions) in the field of telecommunications and web-related activities and equipment (including routers) are affecting prices, access and quality of service in the area of the Internet, particularly in the area of electronic commerce. It would also be interesting to explore how well the enterprises of developing countries and economies in transition would fare in an environment

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[8] This is particularly true in the context of preparations for the WTO Ministerial Meeting of November–December 1999 and the preparations for UNCTAD X.

dominated by the new business models emerging from the Internet.[9] Other developments regarding the Internet, such as the new structure being established for domain names and the emergence of new types of intermediaries (often called "infomediaries"), portals and certification bodies and procedures, also have a significant impact on the power structures which will help to shape the future of electronic commerce. These developments certainly deserve to be explored further from a development point of view.

III. SCOPE FOR ACTION

14. In a fast-changing area such as electronic commerce, there is always a strong temptation to sacrifice longer-term objectives to the fascination of short-term issues. Much has been said, for instance, about business-to-consumer electronic commerce (an area of electronic commerce that has really taken off in the late 1990s), but far less has been said about business-to-business electronic commerce (which will soon constitute a respectable share of international trade, and in which developing countries might find an engine for their integration in the global economy). A similar short-sightedness can be seen, to some extent, in the ongoing discussions on possible trade negotiations on electronic commerce: for all countries – but significantly more so for developing countries – the effects of electronic commerce will be far greater and more profound than expected, and will not be confined to the trade area.

15. At the same time analyses, policies and actions in the area of electronic commerce will need to reflect its truly multifaceted nature. Its technical, economical, legal and social aspects will need to be considered jointly and comprehensively if such analyses, policies and actions are to be relevant and effective. From a practical point of view, this will require both inter-institutional cooperation at the international level and cross-sectoral cooperation at the national level (including through the constitution of national task forces on electronic commerce). Both these aspects would need to be reflected in UNCTAD's work on electronic commerce: the high degree of inter-institutional cooperation that has characterized its work since its inception should be strengthened,[10] and extended to non-governmental entities, including organizations from the private sector.[11]

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[9] One should rather speak of "business models" (the Amazon.com case being significantly different from that of Dell computers or Yahoo.com for instance). However, such models have in common a certain number of characteristics (including a strong emphasis on lower transaction costs, market share, customer visibility, branding and "just-in-time" production methods) which may be more common in advanced countries than in the developing world.

[10] Recently, draft memoranda of understanding have been exchanged between UNCTAD and ITU and between UNCTAD and WIPO. As efforts to increase cooperation with these organizations are pursued, electronic commerce is likely to feature prominently in both cases.

[11] For example, the Partners for Development meeting held in Lyon from 9 to 12 November 1998 (particularly in its GET UP (Global Electronic Trade United Nations Partnership) segment) made it possible to enhance cooperation between UNCTAD and organizations such as the International Chamber of Commerce (ICC) and the Global Information Infrastructure Commission (GIIC).

16. While putting priority on such cooperation, UNCTAD should seek to develop its comparative advantages in the area of electronic commerce. Its focus on development is one specificity that UNCTAD would bring to electronic commerce issues. Another is its unique ability to address both the physical and logistical aspects of electronic commerce, that is, to embrace not only its information flow aspects (e.g. those related to marketing, advertising, credit information or payments in electronic format) but also its logistical and physical components (including transport, customs and trade facilitation instruments).

17. More generally, the following areas deserve attention:

(a) ***Access:*** in spite of its rapid expansion, the Internet is still often too expensive for smaller users in developing countries, especially in the least developed countries and rural areas. The provision of recent global statistics and data in this field (including data on the economic conditions of access) could be one result of possible closer cooperation between UNCTAD and ITU.

(b) ***Human resources:*** in information-intensive activities, capacity-building often revolves around human resources development. The sensitization of Governments and business to the importance of electronic commerce, and the dissemination of the relevant technical and managerial skills remain priorities. Training modules (including modules for training trainers locally) could be developed to enhance developing countries' ability to take advantage of the expansion of electronic commerce.

(c) ***Content:*** the ability to access networks and the capacity to use them to acquire and disseminate information are necessary but not sufficient conditions for worldwide participation in electronic commerce. The ability (especially of small and medium-sized enterprises) to benefit from electronic commerce will imply the increasing production of "local content for global networks", including through language and cultural diversity. The ability of developing countries to participate in electronic commerce not just as consumers but also as producers could be promoted by disseminating the appropriate tools and know-how and by stimulating exchanges of experiences regionally and interregionally.

(d) ***Legal and regulatory frameworks:*** electronic commerce transactions will not flourish in the absence of trust mechanisms. Issues such as certification, authentication, protection of intellectual property and encryption will need to be considered from a truly global point of view, that is, by involving developing countries in the relevant discussions and negotiations. The creation of a reliable legal framework needs to be considered both at the national level and at the international level.

(e) ***Financial and fiscal dimensions:*** payment guarantee mechanisms, as well as trade-financing techniques will be radically affected by the expansion of electronic commerce. Electronic payments will also need to be considered from the point of view of their possible impact on monetary creation. The impact on developing countries of various electronic commerce fiscal scenarios (e.g. duty-free Internet-based commerce) is still unclear and needs to be further explored.

(f) ***Security, power and governance issues:*** the respective roles of Governments, international organizations and the private sector in defining some of the underpinnings of electronic commerce (Internet top-level domain names, trademarks, content control, etc.) need to be further defined. As traditional transaction chains are being "de-intermediated", many intermediaries are becoming less relevant, but new categories of intermediaries (infomediaries) are emerging, and there is a tendency to concentrate in their hands a disproportionate amount of the power to shape the networks and their usage. This is particularly true in the case of portals.

18. Many of the themes outlined above will be developed in greater detail in the background paper which will be produced for the series of regional workshops which UNCTAD will be organizing, as requested by the Commission at its third session.